

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
 US Department of Commerce  
 United States Patent and Trademark  
 Office, PCT  
 2011 South Clark Place Room  
 CP2/5C24  
 Arlington, VA 22202  
 ETATS-UNIS D'AMERIQUE  
 in its capacity as elected Office

<b>Date of mailing</b> (day/month/year) 02 May 2001 (02.05.01)	
<b>International application No.</b> PCT/GB00/02903	<b>Applicant's or agent's file reference</b> PC/MG/P10870PC
<b>International filing date</b> (day/month/year) 28 July 2000 (28.07.00)	<b>Priority date</b> (day/month/year) 30 July 1999 (30.07.99)
<b>Applicant</b> MORRISON, James, Duncan et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:  
22 February 2001 (22.02.01)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was  
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Juan Cruz Telephone No.: (41-22) 338.83.38
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# PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>PC/MG/P10870PC</b>		<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. <b>PCT/GB00/02903</b>	International filing date (day/month/year) <b>28/07/2000</b>	Priority date (day/month/year) <b>30/07/1999</b>
International Patent Classification (IPC) or national classification and IPC <b>C07K14/595</b>		
Applicant <b>THE UNIVERSITY COURT OF THE UNIVERSITY OF GLASGOW</b>		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand  <b>22/02/2001</b>	Date of completion of this report  <b>06.12.2001</b>
Name and mailing address of the international preliminary examining authority:   <b>European Patent Office</b> <b>D-80298 Munich</b> <b>Tel. +49 89 2399 - 0 Tx: 523656 epmu d</b> <b>Fax: +49 89 2399 - 4465</b>	Authorized officer  <b>Pilat, D</b>  Telephone No. <b>+49 89 2399 8668</b>



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB00/02903

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, pages:**

1-22 as originally filed

**Claims, No.:**

1-23 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB00/02903

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes:	Claims	
	No:	Claims	1-10,12,15,16,18-23
Inventive step (IS)	Yes:	Claims	
	No:	Claims	11,13,14,17
Industrial applicability (IA)	Yes:	Claims	1-23
	No:	Claims	

**2. Citations and explanations**  
**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB00/02903

**1. Reference is made to the following documents:**

- D1: US-A-5 446 026 (RUFF ET AL.) 29 August 1995 (1995-08-29)
- D2: EP-A-0 417 725 (HOECHST AG) 20 March 1991 (1991-03-20) & US 5 646 272 A 8 July 1997 (1997-07-08) cited in the application
- D3: P W SWAAN ET AL.: 'Enhanced transepithelial transport of peptides by conjugation to cholic acid' BIOCONJUGATE CHEMISTRY., vol. 8, no. 4, 1997, pages 520-525, XP002158726 AMERICAN CHEMICAL SOCIETY, WASHINGTON., US ISSN: 1043-1802
- D4: DATABASE CHEMABS [Online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; STEPHAN, ZOUHAIR F. ET AL: 'Reduction of cardiovascular and thyroxine-suppressing activities of L-T3 by liver targeting with cholic acid' retrieved from STN Database accession no. 117:63425 CA XP002158727 cited in the application & BIOCHEM. PHARMACOL. (1992), 43(9), 1969-74 , 1992,

**Ad Section V : Reasoned statement under Rule 66.2(a)(ii); citations and explanations supporting such statement**

**2. Novelty (Article 33 (2) PCT)**

- 2.1 D1 discloses an amide of a bile salt selected from cholate, deoxycholate and chenodeoxycholate wherein the group bound to the bile salt by the amide bond is a calcitonin decapeptide amide which was also identified as being an analgesic (see claims 1-7). D1 further discloses pharmaceutical compositions comprising this compound and their use for subcutaneous injection (see col.2 lines 35-54, claims 8-11). As a consequence, claims 1-10, 12, 15, 18-23 lack novelty.
- 2.2 D3 discloses that conjugation of peptides with cholic acid enhances transepithelial transport, ie. oral absorption (see Title). Several bile acid-peptide conjugates were tested , based on the general structural formula shown in Fig. 1, and the transport ability measured (see Table 1, Fig.2 and 3). The results show that this approach has the potential to increase intestinal absorption of otherwise poorly absorbed peptide molecules (see p.525 col.1 2§). Thus, D3 anticipates claims 1-10, 15, 16, 18-22.

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB00/02903

**3. Inventive step (Article 33 (3) PCT)**

Dependent claims 11, 13-14, 17 do not appear to contain any additional features which, in combination with the features of the claims to which they refer, would render these claims inventive.

**Ad Section VIII : Certain observations on the international application.**

**4. Clarity (Article 6 PCT)**

Claim 18 lacks clarity, since the term "derivative" is vague and indefinite. The characteristic of being "physiologically functional" does not help to identify what is readily meant here. The applicant should define in the claim what is understood by said term.

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>PC/MG/P10870PC</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/GB 00/ 02903</b>	International filing date (day/month/year) <b>28/07/2000</b>	(Earliest) Priority Date (day/month/year) <b>30/07/1999</b>
Applicant <b>THE UNIVERSITY COURT OF THE UNIVERSITY OF GLASGOW</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

**IMPROVEMENT OF PEPTIDE TRANSPORT BY CONJUGATION WITH BILE ACIDS**

5. With regard to the **abstract**,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.



as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.

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None of the figures.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/B 00/02903

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07K14/595 C07K14/575 C07K14/47 A61K47/48 A61K38/04

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07K A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

CHEM ABS Data, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 446 026 A (RUFF ET AL.) 29 August 1995 (1995-08-29) claim 1	1-10, 12, 15-23
X	<p>--- P W SWAAN ET AL.: "Enhanced transepithelial transport of peptides by conjugation to cholic acid" BIOCONJUGATE CHEMISTRY., vol. 8, no. 4, 1997, pages 520-525, XP002158726 AMERICAN CHEMICAL SOCIETY, WASHINGTON., US ISSN: 1043-1802 the whole document</p> <p>--- -/--</p>	1-10, 15-23

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex

## ° Special categories of cited documents:

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

\*&amp;\* document member of the same patent family

Date of the actual completion of the international search

30 January 2001

Date of mailing of the international search report

14/02/2001

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl.  
Fax: (+31-70) 340-3016

Authorized officer

Masturzo, P



## INTERNATIONAL SEARCH REPORT

International Application No

PC 8 00/02903

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 417 725 A (HOECHST AG) 20 March 1991 (1991-03-20) the whole document & US 5 646 272 A 8 July 1997 (1997-07-08) cited in the application ---	1-23
A	DATABASE CHEMABS 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; STEPHAN, ZOUHAIR F. ET AL: "Reduction of cardiovascular and thyroxine-suppressing activities of L-T3 by liver targeting with cholic acid" retrieved from STN Database accession no. 117:63425 CA XP002158727 cited in the application & BIOCHEM. PHARMACOL. (1992), 43(9), 1969-74 , 1992, abstract -----	1-23

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PC B 00/02903

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5446026	A	29-08-1995	NONE	
EP 417725	A	20-03-1991	DE 3930696 A	28-03-1991
			AT 152117 T	15-05-1997
			AU 637822 B	10-06-1993
			AU 6244190 A	21-03-1991
			CA 2025294 A	15-03-1991
			DE 59010706 D	28-05-1997
			DK 417725 T	03-11-1997
			ES 2100858 T	01-07-1997
			FI 105155 B	30-06-2000
			GR 3024095 T	31-10-1997
			HU 56115 A, B	29-07-1991
			IE 903329 A	10-04-1991
			IL 95668 A	30-03-1995
			JP 2568306 B	08-01-1997
			JP 3109396 A	09-05-1991
			JP 2642089 B	20-08-1997
			JP 8092276 A	09-04-1996
			JP 2642090 B	20-08-1997
			JP 8092277 A	09-04-1996
			KR 166962 B	15-01-1999
			NO 303450 B	13-07-1998
			NZ 235285 A	26-05-1993
			PT 95299 A, B	22-05-1991
			US 5462933 A	31-10-1995
			US 5668126 A	16-09-1997
			US 5646272 A	08-07-1997
			ZA 9007300 A	26-06-1991

PCT

## REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference  
(if desired) (12 characters maximum) PC/MG/P10870PC

<b>Box No. I TITLE OF INVENTION</b>  PEPTIDE TRANSPORT	
<b>Box No. II APPLICANT</b>  <div style="display: flex; justify-content: space-between;"> <div style="width: 65%;"> <p><small>Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)</small></p> <p>THE UNIVERSITY COURT OF THE UNIVERSITY OF GLASGOW No.10 THE SQUARE UNIVERSITY AVENUE GLASGOW G12 8QQ United Kingdom</p> </div> <div style="width: 30%;"> <p><input type="checkbox"/> This person is also inventor.</p> <p>Telephone No.</p> <p>Facsimile No.</p> <p>Teleprinter No.</p> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 48%;"> <p><small>State (that is, country) of nationality:</small> GB</p> </div> <div style="width: 48%;"> <p><small>State (that is, country) of residence:</small> GB</p> </div> </div> <p><small>This person is applicant for the purposes of:</small>            <input type="checkbox"/> all designated States            <input checked="" type="checkbox"/> all designated States except the United States of America            <input type="checkbox"/> the United States of America only            <input type="checkbox"/> the States indicated in the Supplemental Box       </p>	
<b>Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)</b>  <div style="display: flex; justify-content: space-between;"> <div style="width: 65%;"> <p><small>Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)</small></p> <p>MORRISON James Duncan West Medical Building University of Glasgow University Avenue GLASGOW G12 8QQ, United Kingdom</p> </div> <div style="width: 30%;"> <p><small>This person is:</small></p> <p><input type="checkbox"/> applicant only</p> <p><input checked="" type="checkbox"/> applicant and inventor</p> <p><input type="checkbox"/> inventor only (If this check-box is marked, do not fill in below.)</p> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 48%;"> <p><small>State (that is, country) of nationality:</small> GB</p> </div> <div style="width: 48%;"> <p><small>State (that is, country) of residence:</small> GB</p> </div> </div> <p><small>This person is applicant for the purposes of:</small>            <input type="checkbox"/> all designated States            <input type="checkbox"/> all designated States except the United States of America            <input checked="" type="checkbox"/> the United States of America only            <input type="checkbox"/> the States indicated in the Supplemental Box       </p> <p><input type="checkbox"/> Further applicants and/or (further) inventors are indicated on a continuation sheet.</p>	
<b>Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE</b>  <p><small>The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:</small>            <input type="checkbox"/> agent            <input type="checkbox"/> common representative       </p> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 80%;"> <p><small>Name and address:</small> McCALLUM, William Potter; MacDOUGALL, Donald Carmichael; SZCZUKA, Jan Tymoteusz; NAISMITH, Robert Stewart; HORNER, Martin Grenville, SHANKS, Andrew; NEWELL, Campbell; KERR, Sheila Agnes Fife; MORELAND, David; GODWIN, Edgar James; CRUIKSHANK &amp; FAIRWEATHER, 19 ROYAL EXCHANGE SQUARE, GLASGOW G1 3AE, UNITED KINGDOM (GB)</p> </div> <div style="width: 15%;"> <p>Telephone No. 0141 221 5767</p> <p>Facsimile No. 0141 221 7739</p> <p>Teleprinter No.</p> </div> </div>	

☐ Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

Continuation of Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

*If none of the following sub-boxes is used, this sheet should not be included in the request.*

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

LUCAS Michael Leslie  
West Medical Building  
University of Glasgow  
University Avenue  
GLASGOW G12 8QQ  
United Kingdom

This person is:

- ☐ applicant only  
☒ applicant and inventor  
☐ inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:  
GB

State (that is, country) of residence:  
GB

This person is applicant for the purposes of:

- ☐ all designated States ☐ all designated States except the United States of America ☒ the United States of America only ☐ the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

WHEELER Sarah  
West Medical Building  
University of Glasgow  
University Avenue  
GLASGOW G12 8QQ  
United Kingdom

This person is:

- ☐ applicant only  
☒ applicant and inventor  
☐ inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:  
GB

State (that is, country) of residence:  
GB

This person is applicant for the purposes of:

- ☐ all designated States ☐ all designated States except the United States of America ☒ the United States of America only ☐ the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

This person is:

- ☐ applicant only  
☐ applicant and inventor  
☐ inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

State (that is, country) of residence:

This person is applicant for the purposes of:

- ☐ all designated States ☐ all designated States except the United States of America ☐ the United States of America only ☐ the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

This person is:

- ☐ applicant only  
☐ applicant and inventor  
☐ inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

State (that is, country) of residence:

This person is applicant for the purposes of:

- ☐ all designated States ☐ all designated States except the United States of America ☐ the United States of America only ☐ the States indicated in the Supplemental Box

☐ Further applicants and/or (further) inventors are indicated on another continuation sheet.

**Box No.V DESIGNATION OF STATES**

The following designations are hereby made under Rule 4.9(a) (mark the applicable check-boxes; at least one must be marked):

**Regional Patent**

- ☒ **AP ARIPO Patent:** GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, MZ Mozambique, SD Sudan, SL Sierra Leone, SZ Swaziland, TZ United Republic of Tanzania, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT
- ☒ **EA Eurasian Patent:** AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- ☒ **EP European Patent:** AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- ☒ **OA OAPI Patent:** BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line)

**National Patent (if other kind of protection or treatment desired, specify on dotted line):**

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> <b>AE</b> United Arab Emirates                  | <input checked="" type="checkbox"/> <b>LC</b> Saint Lucia                               |
| <input checked="" type="checkbox"/> <b>AG</b> Antigua and Barbuda                   | <input checked="" type="checkbox"/> <b>LK</b> Sri Lanka                                 |
| <input checked="" type="checkbox"/> <b>AL</b> Albania                               | <input checked="" type="checkbox"/> <b>LR</b> Liberia                                   |
| <input checked="" type="checkbox"/> <b>AM</b> Armenia                               | <input checked="" type="checkbox"/> <b>LS</b> Lesotho                                   |
| <input checked="" type="checkbox"/> <b>AT</b> Austria                               | <input checked="" type="checkbox"/> <b>LT</b> Lithuania                                 |
| <input checked="" type="checkbox"/> <b>AU</b> Australia                             | <input checked="" type="checkbox"/> <b>LU</b> Luxembourg                                |
| <input checked="" type="checkbox"/> <b>AZ</b> Azerbaijan                            | <input checked="" type="checkbox"/> <b>LV</b> Latvia                                    |
| <input checked="" type="checkbox"/> <b>BA</b> Bosnia and Herzegovina                | <input checked="" type="checkbox"/> <b>MA</b> Morocco                                   |
| <input checked="" type="checkbox"/> <b>BB</b> Barbados                              | <input checked="" type="checkbox"/> <b>MD</b> Republic of Moldova                       |
| <input checked="" type="checkbox"/> <b>BG</b> Bulgaria                              | <input checked="" type="checkbox"/> <b>MG</b> Madagascar                                |
| <input checked="" type="checkbox"/> <b>BR</b> Brazil                                | <input checked="" type="checkbox"/> <b>MK</b> The former Yugoslav Republic of Macedonia |
| <input checked="" type="checkbox"/> <b>BY</b> Belarus                               | <input checked="" type="checkbox"/> <b>MN</b> Mongolia                                  |
| <input checked="" type="checkbox"/> <b>BZ</b> Belize                                | <input checked="" type="checkbox"/> <b>MW</b> Malawi                                    |
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| <input checked="" type="checkbox"/> <b>CH and LI</b> Switzerland and Liechtenstein  | <input checked="" type="checkbox"/> <b>MZ</b> Mozambique                                |
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| <input checked="" type="checkbox"/> <b>KG</b> Kyrgyzstan                            | <input checked="" type="checkbox"/> <b>ZW</b> Zimbabwe                                  |
| <input checked="" type="checkbox"/> <b>KP</b> Democratic People's Republic of Korea |   |
| <input checked="" type="checkbox"/> <b>KR</b> Republic of Korea                     |   |
| <input checked="" type="checkbox"/> <b>KZ</b> Kazakhstan                            |   |

Check-box reserved for designating States which have become party to the PCT after issuance of this sheet:



**Precautionary Designation Statement:** In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation (including fees) must reach the receiving Office within the 15-month time limit.)

<b>Box No. VI PRIORITY CLAIM</b>		<input type="checkbox"/> Further priority claim indicated in the Supplemental Box.		
Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country	regional application: regional Office	international application: receiving Office
item (1)  30/07/2000	9917793.3	GREAT BRITAIN		
item (2)				
item (3)				

☒ The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office) identified above as item(s):

\* Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(b)(ii)). See Supplemental Box.

**Box No. VII INTERNATIONAL SEARCHING AUTHORITY**

<b>Choice of International Searching Authority (ISA)</b> (if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used): ISA /	<b>Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority):</b> Date (day/month/year)      Number      Country (or regional Office)
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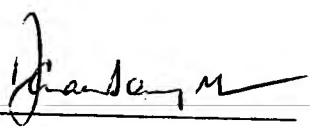
**Box No. VIII CHECK LIST: LANGUAGE OF FILING**

This international application contains the following number of sheets: request : 4 description (excluding sequence listing part) : 22 claims : 5 abstract : 1 drawings : - sequence listing part of description : - <b>Total number of sheets : 32</b>	This international application is accompanied by the item(s) marked below: 1. <input checked="" type="checkbox"/> fee calculation sheet 2. <input type="checkbox"/> separate signed power of attorney 3. <input type="checkbox"/> copy of general power of attorney; reference number, if any: 4. <input type="checkbox"/> statement explaining lack of signature 5. <input type="checkbox"/> priority document(s) identified in Box No. VI as item(s): 6. <input type="checkbox"/> translation of international application into (language): 7. <input type="checkbox"/> separate indications concerning deposited microorganism or other biological material 8. <input type="checkbox"/> nucleotide and/or amino acid sequence listing in computer readable form 9. <input type="checkbox"/> other (specify):
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<b>Figure of the drawings which should accompany the abstract:</b>	<b>Language of filing of the international application:</b>
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**Box No. IX SIGNATURE OF APPLICANT OR AGENT**

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).

  
 D.C. MacDOUGALL

For receiving Office use only	
1. Date of actual receipt of the purported international application:	2. Drawings:  <input type="checkbox"/> received:  <input type="checkbox"/> not received:
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:	
4. Date of timely receipt of the required corrections under PCT Article 11(2):	
5. International Searching Authority (if two or more are competent): ISA /	6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid.

For International Bureau use only	
Date of receipt of the record copy by the International Bureau:	

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
8 February 2001 (08.02.2001)

PCT

(10) International Publication Number  
**WO 01/09163 A2**

- (51) International Patent Classification<sup>7</sup>: C07J
- (21) International Application Number: PCT/GB00/02903
- (22) International Filing Date: 28 July 2000 (28.07.2000)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
9917793.3 30 July 1999 (30.07.1999) GB
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- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- Published:**  
— Without international search report and to be republished upon receipt of that report.
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PEPTIDE TRANSPORT

(57) Abstract: The present invention relates to improving and/or increasing the bioavailability of a biologically active substance, such as a peptide. In particular the present invention relates to the conjugation of the biologically active substance to a bile acid. The conjugated biologically active substance is suitable particularly for oral or parental administration.

WO 01/09163 A2